

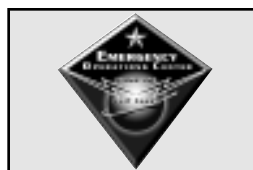


National Aeronautics and  
Space Administration  
**Lyndon B. Johnson Space Center**  
Houston, Texas



## Rendezvous retake

The STS-77 crew returned home with pictures to share during their record rendezvous flight. Story on Page 3.



## EOC opening

VIPs from the surrounding community visit the new Emergency Operations Center. Photo on Page 4.

# Space News Roundup

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STS-78 crew members take a break during the Crew Equipment Interface Test at Kennedy Space Center. From left are Payload Specialist Jean-Jacque Favier; Mission Specialists Chuck Brady, Rich Linnehan and Susan Helms; Pilot Kevin Kregel; Payload Specialist Bob Thirsk; and Commander Tom Hendricks.

NASA Photo

## Thornton to leave NASA, join Virginia faculty

Astronaut Kathy Thornton will leave NASA on Aug. 1 to join the faculty of the University of Virginia.

Thornton, 43, has more than 950 hours in space, including more than 21 hours of extravehicular experience. Thornton joins the faculty as a professor in the School of Engineering and Applied Sciences area and also will serve as director of the Center for Science Education.

"We will certainly miss Kathy's experience and skills," said Dave Leestma, director of Flight Crew Operations. "We wish her the best in her new career."

Thornton is a veteran of four space flights including STS-33 in 1989, STS-49 in 1992, STS-61 in 1993 and STS-73 in 1995.



Thornton

Thornton was a mission specialist on the crew of STS-33 which carried Department of Defense payloads and other secondary payloads. On her second flight, Thornton served on the crew of STS-49, May 7-16, 1992, on board the maiden flight of the Space Shuttle *Endeavour*. During the mission the crew performed a record four space walks to retrieve, repair and deploy the International Telecommunications Satellite, or INTELSAT, and to demonstrate and evaluate numerous EVA tasks to be used for the assembly of the International Space Station.

Thornton served as a mission specialist on the STS-61—the Hubble Space Telescope servicing and

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## Columbia set to launch early next Thursday

By James Hartsfield

With all preparations continuing to go smoothly, the launch countdown clock for *Columbia* will begin ticking early Monday morning toward a 9:49 a.m. CDT liftoff on STS-78 Thursday.

*Columbia* will carry the Life and Microgravity Spacelab aloft, a cargo bay laboratory where studies will focus on the effects of weightlessness on humans, other living organisms and on various materials. The flight is slated to become the second longest shuttle mission ever with landing planned after almost 17 full days in orbit. With an on-time launch, *Columbia* would return to Florida for an 8:51 a.m. CDT touchdown on July 7.

The STS-78 crew—Commander Tom Hendricks; Pilot Kevin Kregel; Payload Commander Susan Helms; Mission Specialists Rich Linnehan and Chuck Brady; and Payload Specialists Jean-Jacques Favier, a French astronaut, and Bob Thirsk, a Canadian astronaut—will arrive at KSC Monday afternoon in preparation for the launch. The crew will be keeping waking and sleeping hours similar to those in Houston during the mission.

The LMS life sciences investigations will focus on the effects of weightlessness on the muscles and bones, among other areas. The materials experiments will study the processing of more pure metal alloys in weightlessness. In addition, a variety of other investigations in the Spacelab will study the effects of weightlessness on the metabolism, heart and lungs and sense of bal-

ance as well as the growth of protein crystals for medical studies on Earth after the flight.

Work on *Columbia* this week at KSC's Launch Pad 39B included fueling the spacecraft's orbital propulsion systems, testing of the two spacesuits stowed onboard in the event they are needed, and closing out the orbiter's main engine compartment.

The countdown will begin at 3 a.m. CDT Monday and the crew is planned to arrive in Florida at 3:30 p.m. CDT Monday.



Elsewhere, *Atlantis* remains on schedule for a launch on STS-79, the fourth shuttle-Mir docking flight, targeted for late on July 31. Currently in the Bay 1 processing hangar, technicians plan to close the payload bay doors for flight by Wednesday. *Atlantis* could be moved to the Vehicle Assembly Bldg. to be mated to the STS-79 solid rockets and fuel tank as early as June 24.

The STS-79 crew—Commander Bill Readdy, Pilot Terry Wilcutt, and Mission Specialists Tom Akers, Jay Apt, Carl Walz and John Blaha—completed interface verification tests last week.

In KSC's Bay 3 hangar, *Endeavour* is being readied for a maintenance and modification period at Rockwell's Palmdale, Calif., shuttle factory.

*Endeavour's* next mission is planned to be the first launch of the International Space Station assembly sequence aboard a shuttle in fall of 1997, and the spacecraft is planned to be in California for about

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## Onufrienko, Usachev conduct final space walk this week

By Karen Schmidt

Mir 21 cosmonauts conducted their final space walk this week while Astronaut John Blaha and his STS-79 crew mates geared up to join the trio in fewer than 50 days.

The Mir 21 crew spent most of the week preparing for Wednesday's space walk. Commander Yuri Onufrienko and Flight Engineer Yuri Usachev installed a new boom truss to the underside of the Russian Mir Space Station's core and Kvant-1 modules. The Rapana boom will replace the existing

boom and will be used on future space walks to transfer cargo from one module to another.

Meanwhile, scientific experiments continue as Cosmonaut Researcher Shannon Lucid focused on life and materials science experiments in the Kristall and Priroda modules. Last week, Onufrienko and Usachev attached the Particle Impact Experiment and Mir Sample Return Experi-



ment outside the Mir station during a three-hour space walk. The experiments were sent to Mir on the Priroda module in April and will remain outside Mir for six months collecting cosmic dust.

"I don't think we will have any problems finishing up," Lucid said during a news conference last week. "I hope that everything goes along as it's going along now and we will be able to finish everything

before STS-79 gets here and we change out. So far everything we have been doing has been going fairly well, and I don't see anything that's going to be a show-stopper."

Lucid's science activities last week included verification tests of the Microgravity Isolation Mount, experiments to characterize the long-term effects of space on the human body and Earth observations.

Meanwhile, Astronaut John Blaha, next in line to replace Lucid in August, spent most of

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## American Heritage week concludes with grand finale at Gilruth today

American Heritage Week will reach a crescendo today with a grand finale of the week-long celebration of JSC's cultural diversity.

Entertainers, food purveyors and exhibitors will welcome visitors from 3-7:30 p.m. in the Gilruth Center's ballroom and old gym.

Native American Jerry Elliott will open the festivities with a prayer and song and Dale Anderson will sing the Star Spangle Banner. A Color Guard will be on hand to complete opening ceremony activities and the entertainment will begin with Czech dancers.

Other entertainers on hand today include the Clear Lake High School Flairs; Hip Bones n' Motion; O'Maoileidigh Irish

dancers; Young Performing Stars of Texas; Chinese Senior Association of Houston Singers and Dancers; Ambassadors International Ballet Folklorico; Seabrook Intermediate Voice Quartet; Singer Yelena Shklar; Flies in Paradise, a Latino musical group; Indian dancers; guitarist Vladimar Rachmanov; Ian Martin's Bagpipes; and tenor Dale Anderson.

Vintage automobiles and Chinese calligraphy will be on display, as will items exhibited earlier in the week at the Gilruth Center.

An Italian lunch special featuring cannelloni beef, pasta verdi, a tossed salad, a roll and butter, and a drink will be served at both cafeterias.



JSC Photo by Robert Markowitz

Hip Bones n' Motion kicks off American Heritage week Monday with a performance for the Bldg. 3 cafeteria lunch crowd.

## Juneteenth program features jazz, drills

JSC's Equal Opportunity Programs Office will sponsor a Juneteenth program featuring a local drill team and a high school jazz ensemble from 11-1 p.m. Wednesday in the Bldg. 3 cafeteria.

Juneteenth celebrates the anniversary of the day that Blacks in Texas received their notification of freedom following the Emancipation Proclamation. The proclamation, drafted in 1862 and put into effect on January 1, 1863, freed slaves in those states that had seceded from the Union. It took six months for the news to reach Texas.

The first group to perform Wednesday will be the Christian Community of Praise! Soldiers Drill Team. CCOPS is part of a local youth crusade ministry whose goals is to let young people know that there is an alternative to life's problems.

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